

What Is Claimed Is:

1 1. A transflective liquid crystal display device
2 capable of balancing color difference between a reflective
3 region and a transmissive region, comprising:

4 a first substrate;

5 a second substrate;

6 a liquid crystal layer disposed between the first and
7 the second substrates;

8 a first polarization plate arranged on the first
9 substrate and opposite to the liquid crystal
10 layer;

11 a second polarization plate arranged on the second
12 substrate and opposite to the liquid crystal
13 layer;

14 a first half-wavelength ($\lambda/2$) plate arranged between
15 the first polarization plate and the liquid
16 crystal layer;

17 a first quarter wavelength ($\lambda/4$) plate arranged between
18 the first half-wavelength plate and the liquid
19 crystal layer;

20 a first alignment film arranged between the first
21 quarter wavelength plate and the liquid crystal
22 layer;

23 a second half-wavelength ($\lambda/2$) plate arranged between
24 the second polarization plate and the liquid
25 crystal layer;

26 a second quarter wavelength ($\lambda/4$) plate arranged
27 between the second half-wavelength plate and the
28 liquid crystal layer;

29 a second alignment film arranged between the second
30 quarter wavelength plate and the liquid crystal
31 layer;
32 a reflective electrode and a transparent electrode
33 arranged in-plane between the second alignment
34 film and the second substrate; and
35 a backlight arranged on a surface of the second
36 polarization plate and opposite to the second
37 substrate,
38 wherein
39 a twist angle of the liquid crystal is 40° to 80° , a
40 retardation $(\Delta n \times d)_{LC}$ of the liquid crystal is 200
41 to 300 nm,
42 an angle (β_{up}) between a rubbing direction of the first
43 alignment film and a transmissive axis of the
44 first polarization plate is -20° to -60° ,
45 an angle (β_{down}) between a rubbing direction of the
46 second alignment film and a transmissive axis of
47 the second polarization plate is -20° to 20° ,
48 an angle (θ_{up}) between the transmissive axis of the
49 first polarization plate and a retardation axis of
50 the first half-wavelength $(\lambda/2)$ plate is 60° to
51 110° ,
52 an angle (θ_{down}) between the transmissive axis of the
53 second polarization plate and a retardation axis
54 of the second half-wavelength $(\lambda/2)$ plate is -30°
55 to 20° ,
56 an angle between the retardation axis of the first
57 half-wavelength $(\lambda/2)$ plate and a retardation axis

58 of the first quarter wavelength ($\lambda/4$) plate is 30°
59 to 100° , and
60 an angle between the retardation axis of the second
61 half-wavelength ($\lambda/2$) plate and a retardation axis
62 of the second quarter wavelength ($\lambda/4$) plate is
63 30° to 80° .

1 2. The transflective liquid crystal display device of
2 claim 1, wherein a retardation of the first and the second
3 half-wavelength ($\lambda/2$) plates is 220nm to 280nm.

1 3. The transflective liquid crystal display device of
2 claim 1, wherein a retardation of the first and the second
3 quarter wavelength ($\lambda/4$) plates is 110nm to 150nm.